

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

To:

see form PCT/ISA/220

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/JP2004/007585

International filing date (day/month/year)  
26.05.2004

Priority date (day/month/year)  
04.07.2003

International Patent Classification (IPC) or both national classification and IPC  
H01M4/62, H01M4/75, H01M6/06

Applicant  
Matsushita Electric Industrial Co., Ltd.

**1. This opinion contains indications relating to the following items:**

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☒ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Name and mailing address of the ISA:



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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material:
    - ☐ in written format
    - ☐ in computer readable form
  - c. time of filing/furnishing:
    - ☐ contained in the international application as filed.
    - ☐ filed together with the international application in computer readable form.
    - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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**Box No. II Priority**

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1. ☒ The following document has not been furnished:
- ☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).
  - ☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).
- Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.
2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. ☐ It has not been possible to consider the validity of the priority claim because a copy of the priority document was not available to the ISA at the time that the search was conducted (Rule 17.1). This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.
4. Additional observations, if necessary:

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**Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	1-5
	No: Claims	
Inventive step (IS)	Yes: Claims	1-5
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-5
	No: Claims	

2. Citations and explanations

**see separate sheet**

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**Box No. VI Certain documents cited**

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1. Certain published documents (Rules 43*bis*.1 and 70.10)  
and /or
2. Non-written disclosures (Rules 43*bis*.1 and 70.9)  
**see form 210**

SECTION V -----

**1. Prior art**

Documents (1) - (9) which were cited in the **International Search Report** are considered to represent relevant prior art; the numbering will be adhered to in the rest of the procedure.

- (1) WO-A-03/083 962
- (2) JP-A-3,297 063
- (3) JP-63,168,968
- (4) US-A-48 06 441
- (5) JP-A-6,176 763
- (6) JP-A-7,272 702
- (7) JP-A-9,237 616
- (8) US-A-38 91 463
- (9) US-A-3 179 5 37

**2. Novelty**

2.1 Document (1) was published on 9.10.03 and is thus only relevant for the purposes of **Rules 33.1 c, 64.3 and 70.10 PCT**. It is at present not taken into account. However, if the priority date is not valid for the complete claimed subject-matter, document (1) may become relevant prior art in a possible regional/national phase.

2.2 Having regard to the cited prior art (2) - (9) the claimed subject-matter appears to fulfil the requirements of **Article 33 (2) PCT**, since none of the cited prior art documents discloses the specific wax composition ( molecular weight not greater than 310 in an amount not greater than 0,5 wt% ).

**3. Inventive step**

3.1 For the assessment of inventive step ( **Article 33 (3) PCT** ) a document has to be identified which represents the **closest prior art** for the claimed electrode material/ carbon rod and starting from that document the technical problem underlying the application in suit ( **Article 33 (3) PCT, Rule 5.1 (a) (iii) PCT** ) has to be addressed.

3.2 Starting from the prior art (2) the first technical problem underlying the application in suit can be considered to be the provision of a further *electrode material/carbon rod* for a

*manganese dry battery* which has unexpected/improved effects over the prior art ( see p.3, par. 2 and 3 ). The solution to this **problem** is the provision of the elec-trode material according to claim 1 with the specific wax composition ( molecular weight not greater than 310 in an amount not greater than 0,5 wt% ). From 'inter alia' citations (2) - (9) it is known to use paraffin wax as sealant for batteries. In the cited prior art there is no **incentive** for the skilled person that the above defined problem can be solved due to the above novelty rendering feature. In order to demonstrate that this problem is solved the Applicant has performed comparative tests ( see p.7, Table 1 ). However, in these tests more than one i.e. several parameters ( melting point of wax, amount of wax in carbon rod, amount of HC ) were modified. It is stressed that the modifying feature should not only characterize the invention in the claim i.e. distinguish it from the prior art, but must contribute causally to the improvement of the capability thereby achieved. In the present case carbon rods have to be compared with those of the respective closest prior art which only differ by the novelty rendering feature all the other features have to be the same. Only such comparative tests could be accepted to recognize inventive step in the sense of **Article 33 (3) PCT**.

3.3 The Applicant is requested to file amendments by way of replacement pages in the manner stipulated by **Rule 66.8 (a) PCT**. In particular, fair copies of the amendments should be filed preferably in triplicate. Moreover, the Applicant's attention is drawn to the fact that, as a consequence of **Rule 66.8 (a) PCT** the examiner is not permitted to carry out any amendments under the PCT procedure, however minor these may be.

3.4 Any newly filed claims are considered to have to satisfy the criteria set forth in **Article 33 (1) PCT**. In such a case the applicant will have to bring the description into conformity with these claims; care should be taken during revision, especially of the introductory portion including any statement of problem or advantage, not to add subject-matter which extends beyond the content of the application as originally filed ( **Article 34 (2) (b) PCT** ).

3.5 Any information the applicant may wish to submit concerning the subject-matter of the invention, for example further details of its advantages or of the problem it solves, and for which there is no basis in the application as filed, should be confined to the letter of reply and not be incorporated into the application ( **Articles 34 (2) (b) and 19 (2) PCT** ).

3.6 Since apart from (2) the documents of the prior art were not identified in the description and the relevant background art disclosed therein was not briefly discussed, the requirements of **Rule 5.1 (a) (ii) PCT** at present are not met. Any dependent claims are only possible as specific form in conjunction with allowable independent claims of the

invention ( **Rule 6.4 PCT** ).

**4. Industrial applicability**

No objection re industrial applicability of claims 1 - 5 arises insofar the claimed subject-matter would illustrate unexpected effects ( **Article 33 (4) PCT** ).

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